REF: A1204.0050

ICTs IN REMOTE ASSESSMENT

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SYNOPSIS

This work describes an experience carried out using Information and Communication Technologies (ICTs) in the assessment of the individual project in the final graduation year. This challenge involved two institutions of higher education, Minho and Porto Universities.

INTRODUCTION

The graduation courses at Minho University include one semester-long seminar of traineeship. This usually takes place in an industry setting outside the University, but can also happen within the University in the context of research projects. The final work developed by the student during the semester must be publicly presented and discussed with an assessment board (supervisors and an external element).

A group of teachers from Minho and Porto Universities interested in the use of remote and virtual laboratory components dedicated to teaching/learning processes, assigned to one particular student the development of a virtual component devoted to put on evidence the characterization of mechanical properties of materials. This system should be a replica of a real set-up built at Faculty of Engineering of Porto University, as a Remote Laboratory component.

The student from a theoretical science area was supposed to deal with engineering science matters, to establish the system model and to develop the particular interactive simulation to be used anywhere by anyone, based on the real application. This virtual component and the tutorials produced as well as other relevant information should be present in the e-learning platform containing the remote component.

The team at Faculty of Engineering at Porto University suggested the use of ICTs for the oral examination. The acceptance from both the colleagues at Minho University and the student led to the experience described below.

The technologies used are based on basic systems for IP voice and video communications, (Nancy Lombardo, Carol Hansen, 2006). The Skype® software is a free application offering the possibility of making free calls to anyone all over the world. It offers excellent sound quality and high security level with end-to-end encryption (Simson L. Garfinkel, 2005). It does not need any special firewall configuration or router or any other networking gear and is available for Windows, Mac OS X, Linux and PDAs using pocket PC. The network camera can be described as a camera and a computer combined in one intelligent unit. It captures and

sends live video directly over an IP network and enables the users to view and/or manage the camera using a standard Web browser or video management software on any local or remote computer on a network, allowing authorized viewers from different locations to simultaneously access images from the same network camera.

The assessment board members at Porto University were following the live presentation taking place at Minho University. Using the Skype conference functionality, the board members were interacting by exchanging written comments throughout the presentation. During the discussion period all the board members had the chance to interact with the student. Figures 1 and 2 illustrate shots taken at School of Engineering, Minho University, during the student formal presentation.

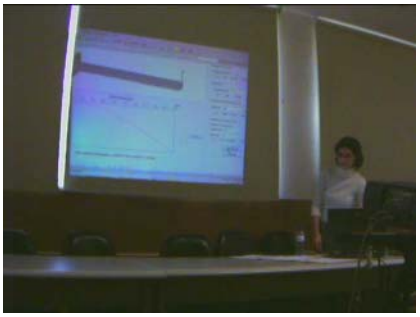

Fig. 1 - Student presentation

Fig. 2 Exam board members at Minho University

Figure 3 illustrates print screens from the chat functionality used for comment exchange between exam board members of both institutions.

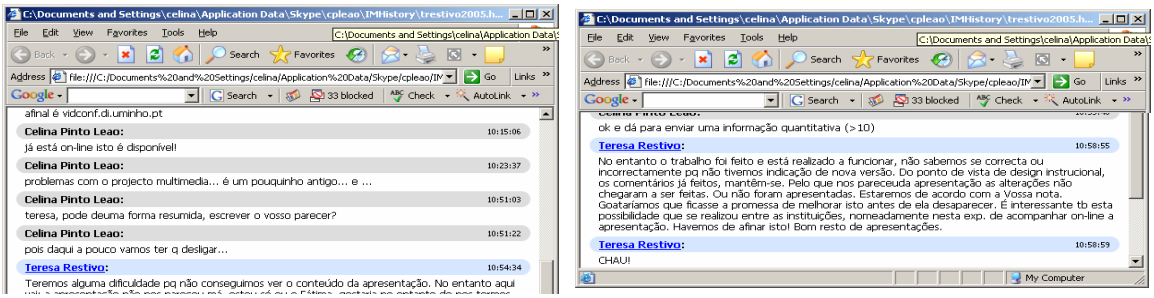

Fig. 3 – Written comments using chat facilities between exam board members

FINAL COMMENTS

The system proved to be efficient. The authors also state that in addition to an important time and cost saving it also enabled, in an efficient way, free comment exchange between exam board members.

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